What is claimed is:

1. A disposable plate electrode, comprising:

a plane substrate;

a conductive film disposed on one of two relative larger surfaces of said substrate;

an electric insulating layer partially covering said conductive film for the bare portion of the latter to form at least a work electrode, a reference electrode, an anode portion, and a cathode electrode, and at least, a biological active layer of said work electrode and reference electrode being covered by the former, wherein said biological active layer is provided with a carrier covering said work electrode and reference electrode; said carrier of cellulose has adsorbed a biological active substance and a conductive mediator, which, the biological active substance, can react with a test sample chemically or biochemically.

2. The disposable plate electrode of claim 1, wherein said substrate can be a board of PVC, FRP (FR-4), Polyester sulfone, Bakelite, PET, PC, Glass, or ceramics (CEM-1), etc.

3. The disposable plate electrode of claim 1, wherein said carrier is a blended paste suitable for screen printing, and the composition includes microcrystalline cellulose, high molecule polymer, salt, and water.

4. The disposable plate electrode of claim 3, wherein grain size of said microcrystalline cellulose is 100 μm down, 10%~40% adulterated.

5. The disposable plate electrode of claim 3, wherein said high molecule polymer with 10%~25% adulterated can be PVA (Polyvinyl alcohol), PVP (Polyvinyl pyrrolidone), PEG (Polyethylene glycol), or gelatin, which may be used in single item or blended.

6. The disposable plate electrode of claim 3, wherein said salt with 1%~5% adulterated can be Dibasic potassium phosphate, Potassium biphosphate, or Citric acid for pH value adjustment in a proper range of pH 4.5 ~ pH 9.0 and can serve as a buffer solution.

7. The disposable plate electrode of claim 3, wherein said water must be pure water undergone at least one time distillation.

8. The disposable plate electrode of claim 1, wherein said biological substance comprising a immobilized or unimmobilized enzyme (such as glucose oxidase), antigen, antibody, microbe cell, animal or plant cell, animal or plant tissue, etc, which possess biological cognizable specialties, being used to contact the test sample (biological tissue such as blood) for chemical or biochemical reaction.

9. The disposable plate electrode of claim 1, wherein said conductive mediator means Potassium ferricyanide and the like with 2%~10% adulterated, which is used to receive electrons released after reaction of an enzyme and the test sample, and the electrons will be transmitted via an electrode conductor to a sensor to be transferred into sample concentration.

10. The disposable plate electrode of claim 8, wherein said biological active substance must be blended with said conductive mediator for use; and composition thereof comprises enzyme, enzyme protector, conductive mediator, and phosphate buffer solution.

11. The disposable plate electrode of claim 10, wherein said enzyme (such as glucose oxidase) is adulterated at 200 U~1200 U/ml.

12. The disposable plate electrode of claim 10, wherein said enzyme protector adulterated at 0.1%~1% can be albumin, dextrin, dextran, or amino acid, and can be used in a single item independently or in blended.

13. The disposable plate electrode of claim 10, wherein said conductive mediator adulterated at 2%~10% means Potassium ferricyanide.

14. The disposable plate electrode of claim 10, wherein a proper pH value of said phosphate buffer solution is 4.8~7.5.

15. A manufacture method for forming a biological active layer to a disposable plate electrode, comprising:

using screen printing technique to print a conductive film on one of two relatively larger surfaces of a substrate including at least an anode electrode and a cathode electrode, and drying it under ambient temperature 40°C~120°C;

using screen printing technique to print an electric insulating layer overlapping said conductive film except some

reserved bare portion of the latter which is to be used forming an anode coupling, a cathode coupling, a work electrode, a reference electrode, and a circular area (an area of biological active layer) formed by said work and reference electrodes;

using screen printing technique to print a layer of cellulose carrier on said circular area, and drying it under room temperature (20° C~30° C);

gluing the peripheral portion of said electric insulating layer around the circular area of said biological active layer, and thereto sticking a net protector to cover the circular area of said biological active layer;

dripping water solution of biological active substance and conductive mediator to surface of said carrier, and drying it under ambient temperature 40° C~60° C to complete the disposable plate electrode.